

## eLog21: AF Logistics Transformation LogEA Business Case Review



March 10, 2004

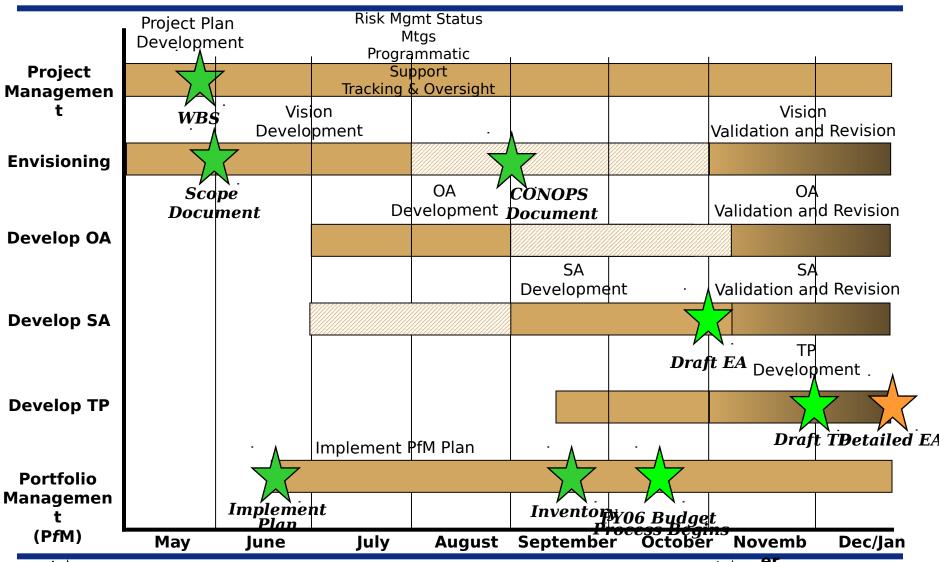
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## AF eLog21 LogEA Effort



#### **U.S. AIR FORCE**



## Operational Architecture





## **Future State Architecture** addresses the eLog21 Concepts







#### **Plan Supply Chain**

- Cascade capability based goals through operating plans to drive supply chain planning
- Develop logistics enterprise forecasts based upon AF O-Plans and training requirements
- Develop budgets and allocate cost authority
- Cascade centrally developed metrics and goals down through the enterprise
- Centrally plan for all classes of supply as well as maintenance and delivery functions

#### 🎮 Plan Source 🥦 Plan Make 🎮 Plan Deliver 📂 Plan Return





- Enable supplier selection
  - Manage contracting documentation
  - Sustain engineering
- Administer contracts
- Conduct rough cut capacity planning and repair
  - workload allocation
  - Conduct business planning and budgeting
- Conduct dynamic loa

- Planning for third party
  - logistics providers
  - Supply chain inventories managed
- Inventory

- Plan for retrograde requirements and resources
- Use demand plan to develop returns forecast

## EXECUTION strategies developed

#### Source

Purchasing

#### Make

#### **Deliver**

#### Return

- Automated order entry and tracking
  - Schedule and manage product deliveries against contracts and/or purchase orders
  - Authorize paymen to suppliers

- Short range planning and scheduling
  - Test and tear down of incoming carcasses
  - Initiate induction process
  - Repair / Manufacture
- Assemble and Test

- Materiel Management
  - Prepare and ship end items
- Provide shipping schedules. EDDs an status
- Manage retrograde shipments to get carcasses to the
  - SOR efficiently and effectively
- Materiel distribution and shipping



# High Level Current State Systems Architecture





## **Current systems cost** breakdown





#### High Profile Systems Compared to Total System Inventory



| System Category               | А  | ll Identified   |                       | Hiç | Jh Profile Systems | #of High<br>Profile<br>Systems | % High Profile<br>Systems in Scope<br>vs. Total Systems | % High Profile Systems in Scope vs. Total in Scope |
|-------------------------------|----|-----------------|-----------------------|-----|--------------------|--------------------------------|---|--|
| (FUNCTRIONAL AREA)            |    | Systems         | All Systems in Scope* |     | in Scope***        | in Scope                       | in Scope  | Category   |
| CIVIL ENGINEERING             | \$ | 143,086,600     |                       |     |                    |                                |   |  |
| COMMUNICATION OPERATIONS      | \$ | 14,443,465      |                       |     |                    |                                |   |  |
| INNOVATION AND TRANSFORMATION | \$ | 2,977,953       | \$2,977,953           | \$  | 499,616            | 2                              | 0%  | 17%  |
| LOGISTICS PLANNING            | \$ | 271,323,299     | \$260,783,166         | \$  | 203,442,504        | 28                             | 7%  | 78%  |
| MAINTENANCE                   | \$ | 1,298,162,845   | \$1,176,990,920       | \$  | 1,105,153,519      | 60                             | 39%   | 94%  |
| MUNITIONS                     | \$ | 24,893,161      | \$24,893,161          | \$  | 22,140,161         | 4                              | 1%  | 89%  |
| OTHER                         | \$ | 256,345,143     | \$256,345,143         | \$  | 240,496,067        | 17                             | 8%  | 94%  |
| RESOURCES                     | \$ | 7,769,207       |                       |     |                    |                                |   |  |
| SERVICES                      | \$ | 35,309,426      |                       | \$  | 750,000            | 1                              | 0%  |  |
| SUPPLY                        | \$ | 1,029,434,983   | \$1,029,434,983       | \$  | 1,025,054,198      | 58                             | 36%   | 100%   |
| TRANSPORTATION                | \$ | 91,119,888      | \$90,989,238          | \$  | 90,327,000         | 3                              | 3%  | 99%  |
| TOTAL \$\$                    |    | \$3,174,865,969 | \$2,842,414,563       | \$  | 2,687,863,065      | 173                            | 95%   | 95%  |
| TOTAL NUMBER OF SYSTEMS       |    | 659             | 515                   |     | 170                | 173                            |   |  |

| % of Systems \$\$ in Scope / Total \$\$s | 90% |
|--|-----|
| % \$\$ in 173 systems/ \$\$ in Scope     | 95% |
| % \$\$ in 173 systems/ Total \$\$s       | 85% |

\*Note: "in Scope" means that the following Categories (FUNCTIONAL AREA) that are 'out of scope' have been removed: Civil Engineering, Communication Operations, Services and Resources

\*\*\* High Profile Systems in Scope were compiled using the following criteria/filters:

1) Are included in the following functional categories:

Innovation and Transformation

Logistics Planning

Maintenance

Munitions

Other

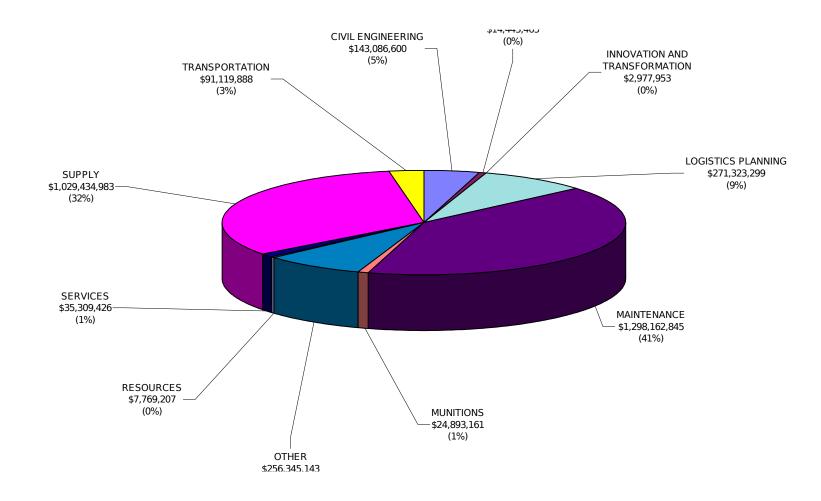
Supply Transportation

- 2) Are in the top 100 by appropriation amount
- 3) Are children of top 100
- 4) Identified by Working Groups



## All identified systems (659)

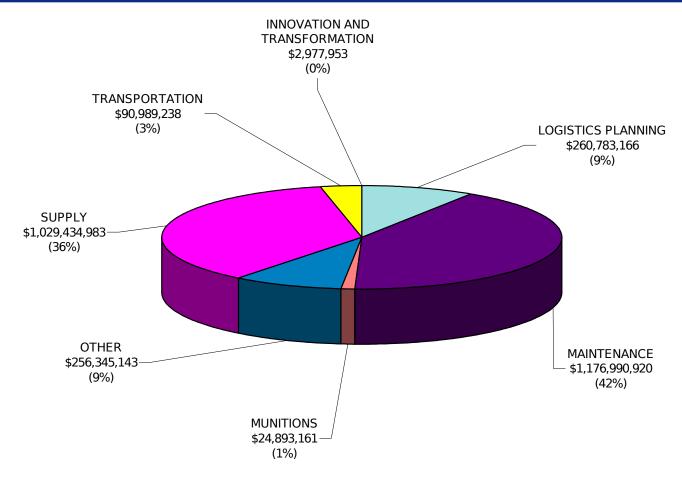






## All in-scope systems (515)

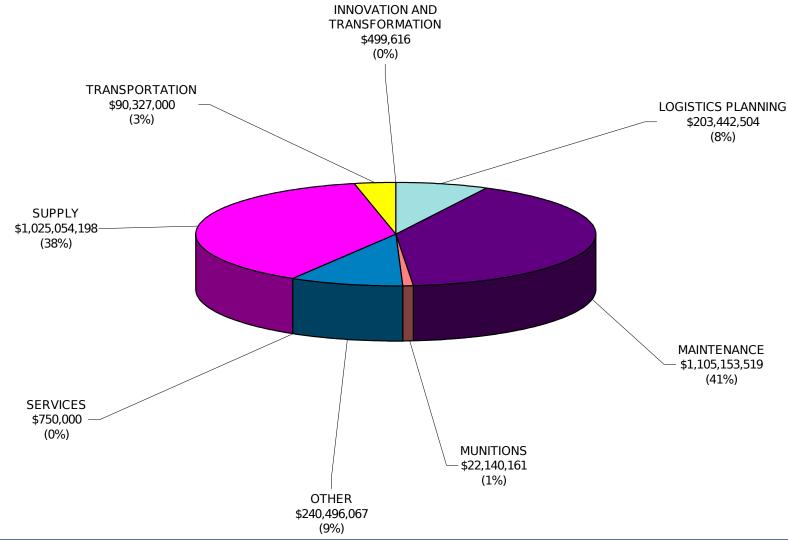






## **High Profile Systems (173)**



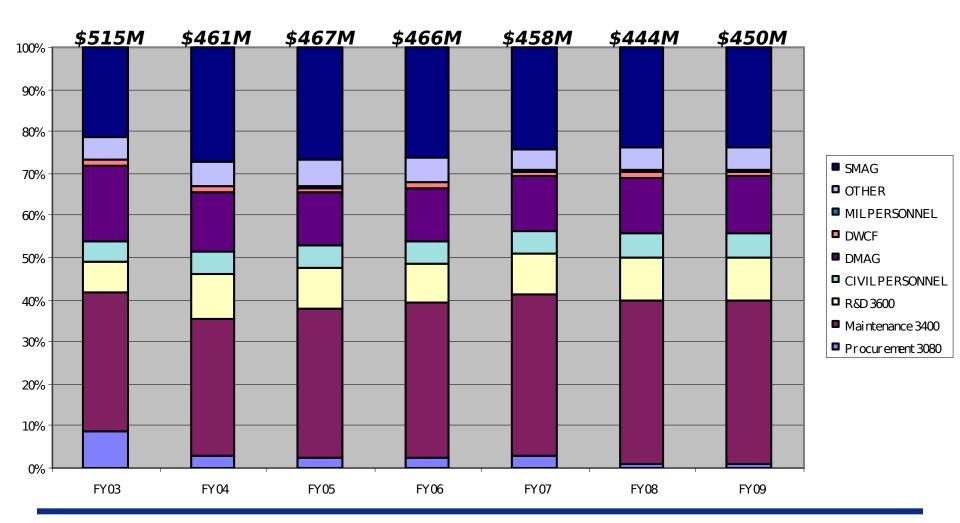




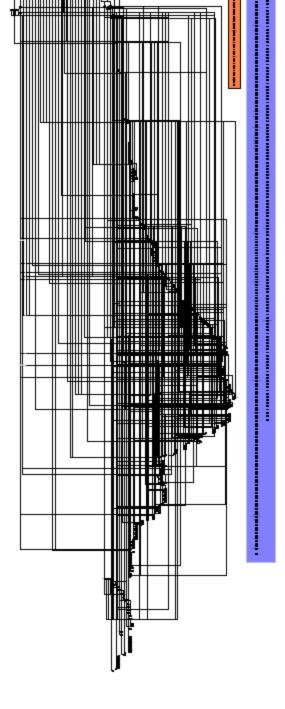
## **Current State Appropriations**



\$3.3 Billion FY03-FY09
Appropriations by Fiscal Year



Current SV create from completed system surveys





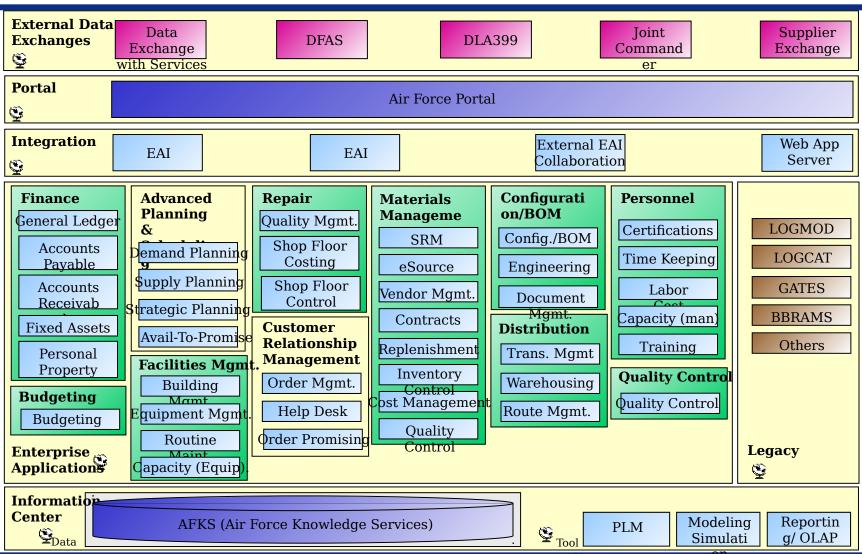
# High Level Future State Systems Architecture



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## **eLog21 Future State Systems Architecture**





LogEA leverages GCSS-AF Technical Architecture

## Business Case Construct





## LogEA Solution Alternatives



#### **Modernization**

#### Description

Consolidate and modernize existing systems and integrate them.

- •Legacy system driven solution.
- •EAI (integration) is a considerable cost.
- •Cross-functionality/ commonality will be key in consolidation and replication of systems.
- •Change Management will be easier as compared to other alternatives.

#### **Best-of-Breed**

#### Description

Replace the existing portfolio through integration of functional Best-of-Breed COTS applications.

- •This solution will rely heavily on EAI (integration) technology as legacy systems and new systems will be integrated.
- •Costing for the Best-of-Breed will be at a premium for each module as functionality capability is highest and solutions purchases aren't packaged.
- Change Management will

#### **Enterprise (ERP)**

#### Description

Replace the existing portfolio with a core ERP system and limited COTS "bolt-ons" for specific functionality.

- •ERP is the significant cost factor and drives cost model.
- •EAI will be less due to inherent nature of ERP. Integration will be primarily with remaining legacy systems.
- •Change Management will be significant few functional applications.

be significant across many



## **Example: Current Systems in place**

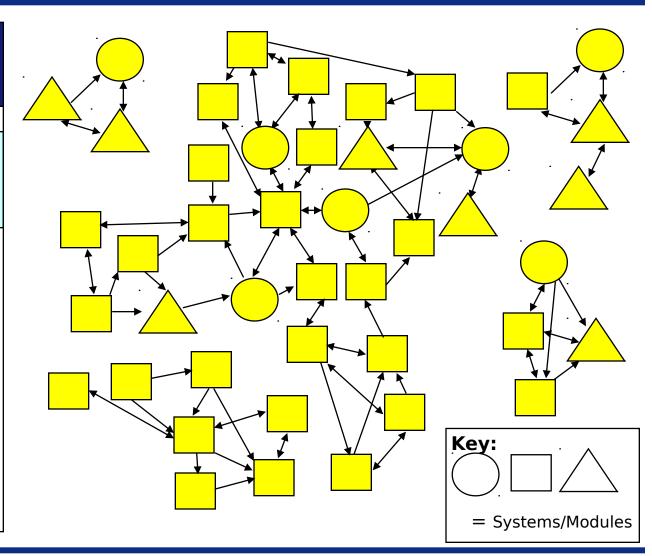


#### **Current State**

#### **Description**

Multiple Legacy systems with multiple point-to-point interfaces and with some systems groups isolated.

- Multiple point-to-point Legacy systems.
- •Has gaps with future state functional and technical gaps.
- •Isolated groups of systems where communications of information between groups are manual.
- Much manual entry.





## **Example: Modernization**

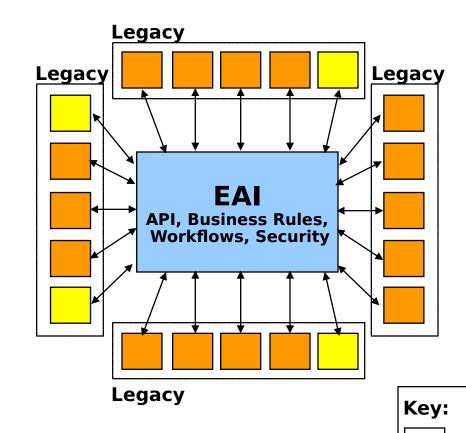


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- Change Management will be easier as compared to other



alternatives

= System/Module



## **Example: Best-of-Breed (BOB)**

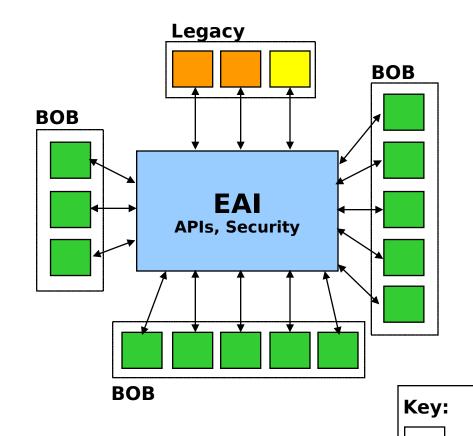


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= System/Module



## **Example: Enterprise (ERP)**

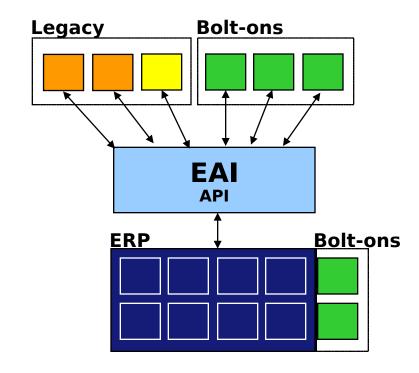


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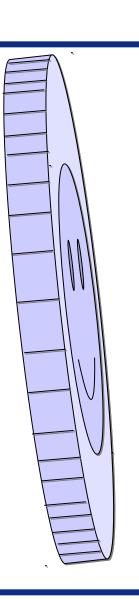
| Key | 1              |   |
|-----|----------------|---|
|     | = System/Modul | e |



### **Business Case**



Functional Business Case



Financial Business Case

## Functional Business Case



Integrity - Service - Excellen



## Functional Gap Assessment



#### **Background:**

- Future State decomposed to 436 process attributes
- 5 workshops were held with subgroups of AWG members and SMEs for major SCOR processes
- Assessments were collected at the class-of-material level (consumables, reparables, fuels, munitions, vehicles, equipment)
- Assessed current processes and systems ability to fulfill future state attributes
- Explanatory information was more revealing than yes / no
- Identified AF unique and/or best-in-class processes and systems



## **Current State Gaps**



#### 1. Absence of an enterprise view

- Warfighter requirements and logistics capabilities poorly linked
- Conflicting performance metrics across organizations and functions

#### 2. Fragmented planning processes

- Lack of centralized Supply Chain planning process
- Planning across functions and organizations not coordinated
- Unresponsive planning and re-planning processes

#### 3. Lack of integration

- Limited visibility of resources and capacity across the enterprise
- Limited predictive or causal analysis capability
- Disconnect from Suppliers (internal and external)

#### 4. No enterprise systems strategy

- Proliferation of non-integrated IT tools (county options)
- No logistics portfolio management
- Numerous unsynchronized data handoffs and data gaps
- Multiple data models

## Financial Business Case





## Financial Business Case Approach



#### **Resources:**

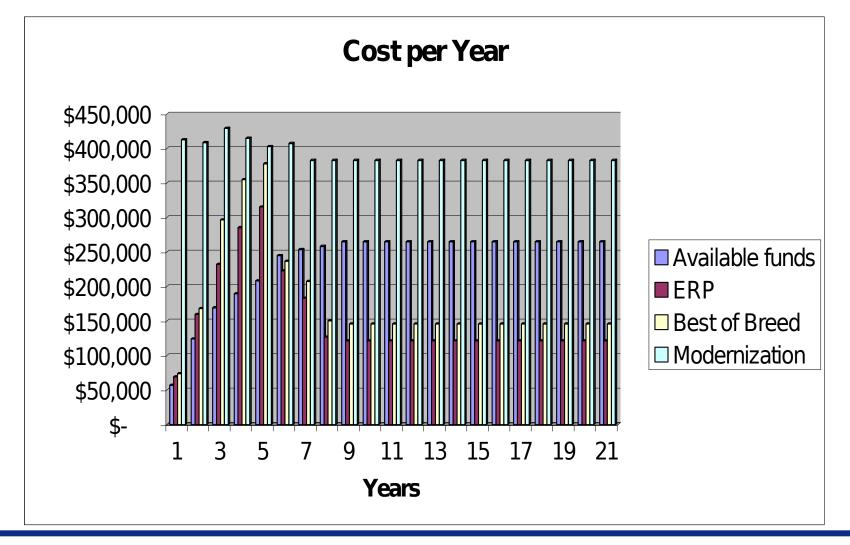
- Best Practice Standards
- Subject Matter Experts (SMEs)
- Industry Benchmarks
- Gartner Group/AMR Studies
- Historical Projects/Data

#### **Tools/Templates**

- Implementation Sizing Model
  - Template driven from BE experience utilized for implementation sizing and estimation
- QSM Software Lifecycle Model (SLIM)
  - Developed by Lawrence H. Putnam at QSM (Quantitative Software Management), Inc., SLIM is a quantitative software estimation model grounded in more than 25 years of software research experience and based on a historical database of over 4,000 projects of all sizes and types, including Government Enterprise Solution projects.

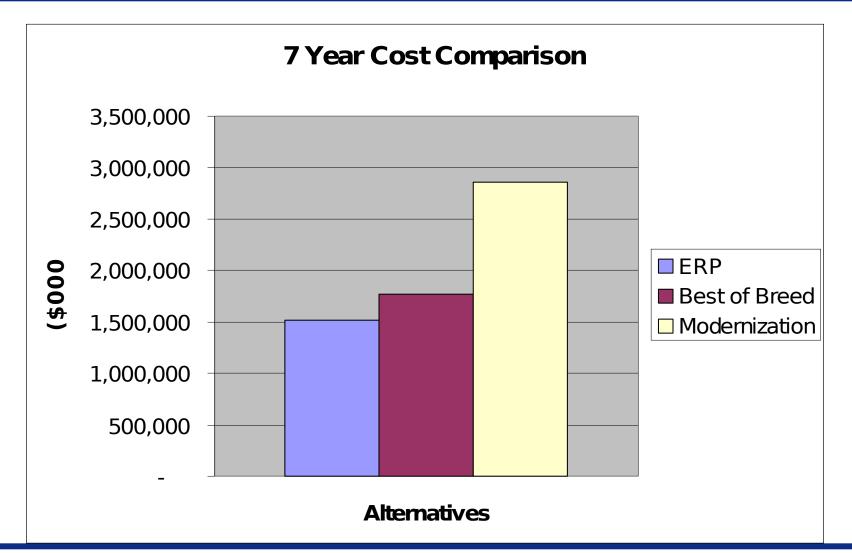






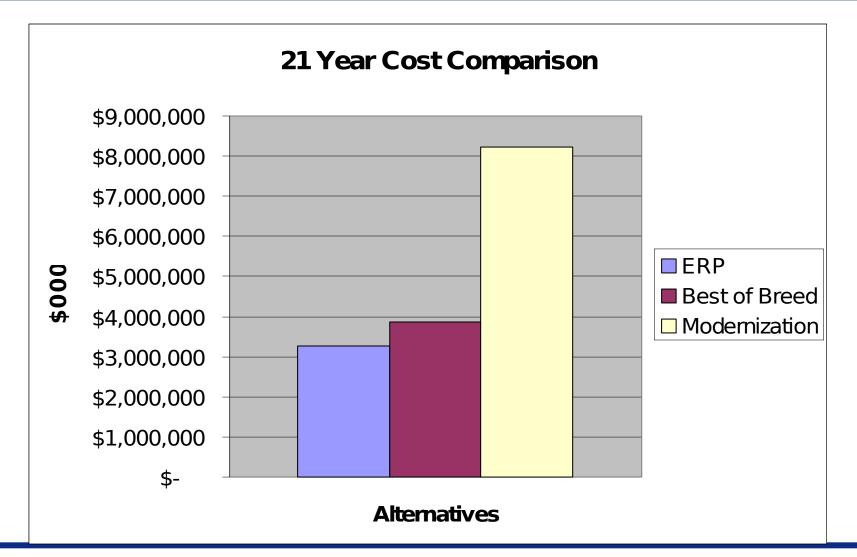






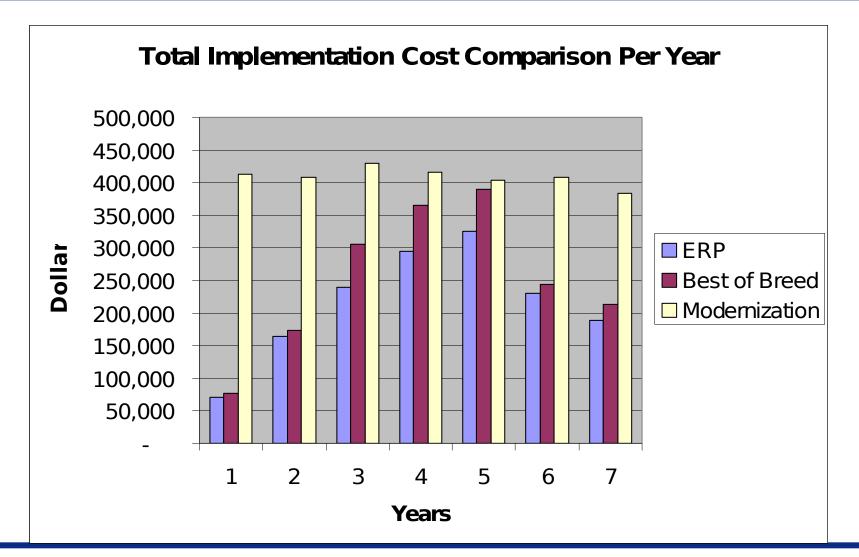








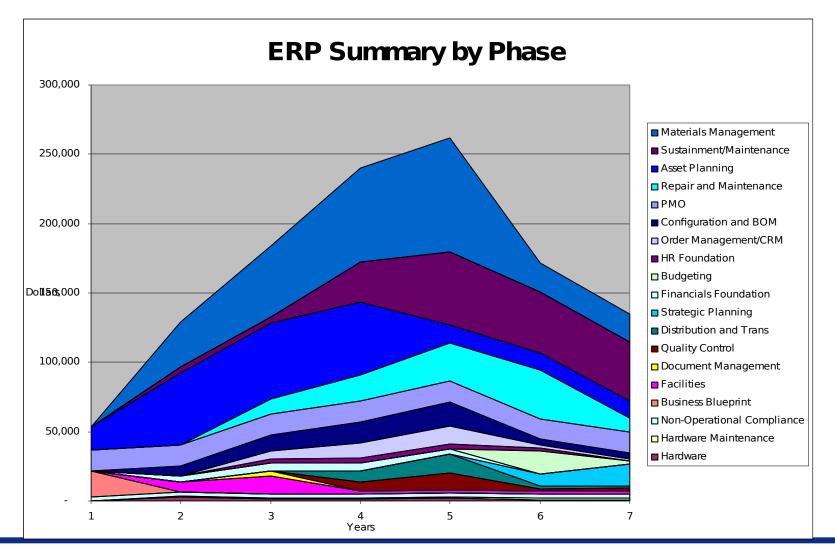






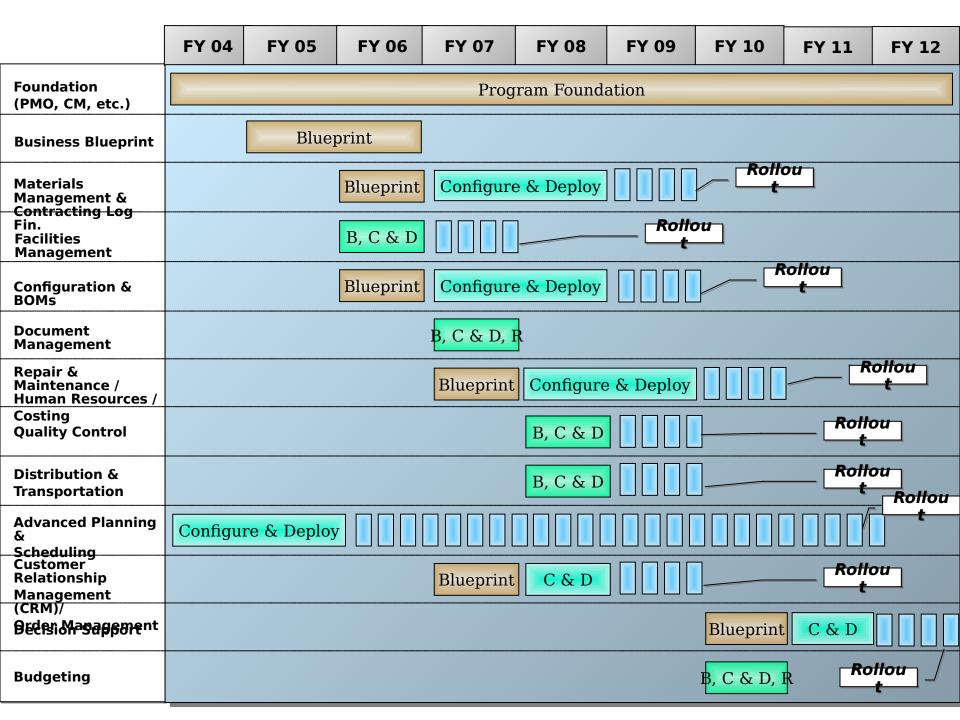
# **ERP Cost Components**





## Transition Plan Approach







## Referenced TP Factors to Determine Block Sequence



|   | Decision Factors   |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|
| egic<br>No-<br>o<br>Sion                | Funding and Financing Air Force Senior Leadership Support  |  |  |  |  |  |  |  |  |
| Strategic<br>Go / No-<br>Go<br>Decision | Implementation Governance  |  |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |  |  |
| Imple<br>mentti<br>on<br>Goals          | Establish Factors that will be used to define the Priorities for Implementation ROI, Time to Benefit, Change Impact, Operational Impact,                       |  |  |  |  |  |  |  |  |
| <u>-</u>                                |  |  |  |  |  |  |  |  |  |
| Identify /<br>Prioritize<br>Initiatives | Operational Risk Organization Readiness Alignment with Other Initiatives al and Legislative Facto  Total Force Considerations                                  |  |  |  |  |  |  |  |  |
| Identi<br>Priorit<br>Initiati           | Organization /Structure Impact<br>Vendors - S/W, Tech, Integration   |  |  |  |  |  |  |  |  |
| U (I)                                   |  |  |  |  |  |  |  |  |  |
| Sequenc<br>e &<br>Impleme<br>nt         | Project Risk ata Accuracy Return on Investment Financing Stream ata Accuracy ata Accuracy Organizational Willingness, Personnel System Sequencing Requirements |  |  |  |  |  |  |  |  |
|   | Skillsets  |  |  |  |  |  |  |  |  |



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**Dependencies and Priorities:** 



Decision Support Transitional Plan & Budgeting Support Support

**Advanced Planning** and Scheduling Customer Repair / HR / Costing Relationshi **Configuration Document** & BOM **Manageme Manageme** nt/ Order nt **Facilities Manageme** nt Contracting **Materials** Mgmt. (FI) **Distributio** n & **Quality** Control **Transporta** tion

#### **GRAPH KEY:**



Fundamental
Functions (need to be rolled out first)
Independent



Independent
Functions (Can be rolled out anytime after the Fundamental



**Sequential**re rolled **Putactions** (functions that need to be rolled

out in coguence) .—

## Wrap Up



Integrity - Service - Excellen